

WHAT IS CLAIMED IS:

1. A multi-leaf collimator apparatus comprising leaf plate driving bodies each including a plurality of movable leaf plates and provided respectively on one side and the other side, the plurality of leaf plates of said leaf plate driver on the other side being disposed in an opposing relation to form an irradiation field of a radiation beam between the opposing leaf plates, wherein:

each of said leaf plate driving bodies comprises a leaf plate moving device for moving said leaf plates by engaging with said plural leaf plates and transmitting driving force to said engaged leaf plates, a driving force transmitting/cutoff device having a first motion moving each of said plural leaf plates to positions where each of said leaf plates engages with said leaf plate moving device and a second motion detaching each of said leaf plates from said leaf plate moving device, and a control device for engaging said plural of leaf plates with said leaf plate moving device by controlling said driving force transmitting/cutoff device said and canceling engagements between a leaf plate arrived at a predetermined position in said plural leaf plates and said leaf plate moving device by controlling said driving force transmitting/cutoff device.

2. A multi-leaf collimator apparatus according to claim 1, further comprising a position detecting device for detecting positions of said plural leaf plates, wherein

said control device comprising a memory device for memorizing predetermined positions for said plural leaf plates respectively, inputting position information of said plural leaf plates detected by said position detecting device, and detaching a leaf plate from leaf plate moving device, at the position of which said position information becomes to be a corresponding predetermined position by controlling said driving force transmitting/cutoff device.

3. A multi-leaf collimator apparatus according to claim 2, wherein said predetermined position for said plural leaf plates is information memorized in a database accompanied with a remedy scheduling unit.

4. A multi-leaf collimator apparatus according to claim 1, wherein said leaf plate moving device is a rotation device.

5. A multi-leaf collimator apparatus comprising leaf plate driving bodies each including a plurality of movable leaf palates and provided respectively on one side and the other side, the plurality of leaf plates of said leaf plate driver on the other side being disposed in an opposing relation to form an irradiation field of a radiation beam between the opposing leaf plates, wherein

each of said leaf plate driving bodies comprises a leaf plate moving device for moving said leaf plates by engaging with said plural leaf plates, a transmitting/cutoff device being provided corresponding to said plural leaf plate

respectively and engaging and detaching corresponding leaf plate for said leaf plate moving device freely, and a control device for engaging said plural of leaf plates with said leaf plate moving device by controlling said transmitting/cutoff device and cancelling engagements between a leaf plate arrived at a predetermined position in said plural leaf plates and said leaf plate moving device by controlling said transmitting/cutoff device.

6. A multi-leaf collimator apparatus according to claim 5, further comprising a position detecting device for detecting positions of said plural leaf plates, wherein

said control device comprising a memory device for memorizing predetermined positions for said plural leaf plates respectively, inputting position information of said plural leaf plates detected by said position detecting device, and detaching a leaf plate from leaf plate moving device, at the position of which said position information becomes to be a corresponding predetermined position by controlling said transmitting/cutoff device.

7. A multi-leaf collimator apparatus according to claim 6, wherein said predetermined position for said plural leaf plates is information memorized in a database accompanied with a remedy scheduling unit.

8. A multi-leaf collimator apparatus according to claim 5, wherein said

leaf plate moving device is a rotation device.

9. A medical system including an accelerator, comprising:

an accelerator; and

an irradiator having a collimator through which a radiation beam emitted from said accelerator passes, and irradiating the beam having passed said collimator, wherein:

said collimator device comprises leaf plate driving bodies, each including plural movable leaf plates and provided respectively on one side and the other side, said plural leaf plate of said leaf plate driving bodies being disposed in an opposing relation to form an irradiation field of the radiation beam between the opposing leaf plates, wherein

each of said leaf plate driving bodies comprises a leaf plate moving device for moving said leaf plates by engaging with said plural leaf plates and transmitting driving force to said engaged leaf plates, a driving force transmitting/cutoff device having a first motion moving each of said plural leaf plates to positions where each of said leaf plates engages with said leaf plate moving device and second motion detaching each of said leaf plates from said leaf plate moving device, and a control device for engaging said plural of leaf plates with said leaf plate moving device by controlling said driving force transmitting/cutoff device said and canceling engagements between a leaf plate arrived at a predetermined position in said plural leaf plates and said leaf plate

moving device by controlling said driving force transmitting/cutoff device.

10. A medical system according to claim 9, wherein said leaf plate moving device is a rotation device.

11. A medical system including an accelerator, comprising:

an accelerator; and

an irradiator having a collimator device through which a radiation beam emitted from said accelerator passes, and irradiating the beam having passed said collimator, wherein:

said collimator device comprises leaf plate driving bodies, each including plural movable leaf plates and provided respectively on one side and the other side, said plural leaf plate of said leaf plate driving bodies being disposed in an opposing relation to form an irradiation field of the radiation beam between the opposing leaf plates, wherein

each of said leaf plate driving bodies comprises a leaf plate moving device for moving said leaf plates by engaging with said plural leaf plates, a transmitting/cutoff device being provided corresponding to said plural leaf plate respectively and engaging and detaching corresponding leaf plate for said leaf plate moving device freely, and a control device for engaging said plural of leaf plates with said leaf plate moving device by controlling said transmitting/cutoff device and cancelling engagements between a leaf plate arrived at a

predetermined position in said plural leaf plates and said leaf plate moving device by controlling said transmitting/cutoff device.

12. A medical system according to claim 11, further comprising a position detecting device for detecting positions of said plural leaf plates, wherein

said control device comprising a memory device for memorizing predetermined positions for said plural leaf plates respectively, inputting position information of said plural leaf plates detected by said position detecting device, and detaching a leaf plate from leaf plate moving device, at the position of which said position information becomes to be a corresponding predetermined position by controlling said transmitting/cutoff device.

13. A medical system according to claim 12, wherein said predetermined position for said plural leaf plates is information memorized in a database accompanied with a remedy scheduling unit.

14. A medical system according to claim 11, wherein said leaf plate moving device is a rotation device.

15. A multi-leaf collimator apparatus comprising leaf plate driving bodies each including a plurality of movable leaf plates and provided respectively on one side and the other side, the plurality of leaf plates of said leaf plate driver on

the other side being disposed in an opposing relation to form an irradiation field of a radiation beam between the opposing leaf plates, wherein

each of said leaf plate driving bodies comprises a leaf plate moving device for moving said leaf plates by engaging with said plural leaf plates and transmitting driving force to said engaged leaf plates, a driving force transmitting/cutoff device having a first motion moving each of said plural leaf plates to positions where each of said leaf plates engages with said leaf plate moving device in another direction crossing a moving direction of said leaf plate and a second motion detaching each of said leaf plates from said leaf plate moving device by moving in said another direction, and a control device for engaging said plural of leaf plates with said leaf plate moving device by controlling said driving force transmitting/cutoff device said and cancelling engagements between a leaf plate arrived at a predetermined position in said plural leaf plates and said leaf plate moving device by controlling said driving force transmitting/cutoff device.

16. A multi-leaf collimator apparatus comprising leaf plate driving bodies each including a plurality of movable leaf palates and provided respectively on one side and the other side, the plurality of leaf plates of said leaf plate driver on the other side being disposed in an opposing relation to form an irradiation field of a radiation beam between the opposing leaf plates, wherein

each of said leaf plate driving bodies comprises a leaf plate moving device

for moving said leaf plates by engaging with said plural leaf plates, a transmitting/cutoff device being provided corresponding to said plural leaf plate respectively and engaging and detaching corresponding leaf plate for said leaf plate moving device freely by moving said corresponding leaf plate in another direction crossing a moving direction of said leaf plate, and a control device for engaging said plural of leaf plates with said leaf plate moving device by controlling said transmitting/cutoff device and canceling engagements between a leaf plate arrived at a predetermined position in said plural leaf plates and said leaf plate moving device by controlling said transmitting/cutoff device.

17. A multi-leaf collimator apparatus according to claim 16, further comprising a position detecting device for detecting positions of said plural leaf plates, wherein

said control device comprising a memory device for memorizing predetermined positions for said plural leaf plates respectively, inputting position information of said plural leaf plates detected by said position detecting device, and detaching a leaf plate from leaf plate moving device, at the position of which said position information becomes to be a corresponding predetermined position by controlling said transmitting/cutoff device.

18. A multi-leaf collimator apparatus according to claim 17, wherein said predetermined position for said plural leaf plates is information memorized in a database accompanied with a remedy scheduling unit.

19. A multi-leaf collimator apparatus according to claim 16, wherein said leaf plate moving device is a rotation device.

20. A multi-leaf collimator apparatus according to claim 16, wherein said leaf plate moving device comprises a holding device stopping a position thereof by attaching to said leaf plate.

21. A medical system including an accelerator, comprising:

an accelerator; and

an irradiator having a collimator device through which a radiation beam emitted from said accelerator passes, and irradiating the beam having passed said collimator, wherein:

said collimator device comprises leaf plate driving bodies each including plural movable leaf plates and provided respectively on one side and the other side, said plural leaf plate of said leaf plate driving bodies being disposed in an opposing relation to form an irradiation field of the radiation beam between the opposing leaf plates, wherein

each of said leaf plate driving bodies comprises a leaf plate moving device for moving said leaf plates by engaging with said plural leaf plates, a transmitting/cutoff device being provided corresponding to said plural leaf plate respectively and engaging and detaching corresponding leaf plate for said leaf plate moving device freely by moving said corresponding leaf plate in another

direction crossing a moving direction of said leaf plate, and a control device for engaging said plural of leaf plates with said leaf plate moving device by controlling said transmitting/cutoff device and cancelling engagements between a leaf plate arrived at a predetermined position in said plural leaf plates and said leaf plate moving device by controlling said transmitting/cutoff device.

22. A medical system including an accelerator, comprising:

an accelerator; and

an irradiator having a collimator device through which a radiation beam emitted from said accelerator passes, and irradiating the beam having passed said collimator, wherein:

said collimator device comprises leaf plate driving bodies each including plural movable leaf plates and provided respectively on one side and the other side, said plural leaf plate of said leaf plate driving bodies being disposed in an opposing relation to form an irradiation field of the radiation beam between the opposing leaf plates, wherein

each of said leaf plate driving bodies comprises a leaf plate moving device for moving said leaf plates by engaging with said plural leaf plates, a transmitting/cutoff device being provided corresponding to said plural leaf plate respectively and engaging and detaching corresponding leaf plate for said leaf plate moving device freely by moving said corresponding leaf plate in another direction crossing a moving direction of said leaf plate, and a control device for

engaging said plural of leaf plates with said leaf plate moving device by controlling said transmitting/cutoff device and cancelling engagements between a leaf plate arrived at a predetermined position in said plural leaf plates and said leaf plate moving device by controlling said transmitting/cutoff device.

23. A medical system according to claim 22, further comprising a position detecting device for detecting positions of said plural leaf plates, wherein said control device comprising a memory device for memorizing predetermined positions for said plural leaf plates respectively, inputting position information of said plural leaf plates detected by said position detecting device, and detaching a leaf plate from leaf plate moving device, at the position of which said position information becomes to be a corresponding predetermined position by controlling said transmitting/cutoff device.

24. A medical system according to claim 23, wherein said predetermined position for said plural leaf plates is information memorized in a database accompanied with a remedy scheduling unit.

25. A medical system according to claim 22, wherein said leaf plate moving device is a rotation device.

26. A medical system according to claim 22, wherein said leaf plate

moving device comprises a holding device stopping a position thereof by
attaching to said leaf plate.